

IN THE CLAIMS:

The currently pending claims are:

1. (Previously Presented) An assembly method for a semiconductor device assembly using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising:
forming a strip of lead frames, said strip having opposed rails, having dam bars between said opposed rails, having at least two inner leads located at a first level, having at least two outer leads located at a second level, having a die mount paddle located at a third level and having at least one integral clamping tab, said at least one integral clamping tab located at a fourth level extending outwardly for contact by said upper clamp member; attaching a semiconductor device to said die mount paddle, said semiconductor device having a plurality of bond pads;
aligning said strip of lead frames on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of said at least one integral clamping tab; and
attaching at least two bond wires to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.
2. (Previously Presented) The method of claim 1, further comprising:
forming said die mount paddle having an upper surface thereof at a third level located below an upper first level of said at least two inner leads; and
deforming said at least one integral clamping tab to clamp portions thereof.
3. (Previously Presented) The method of claim 1, further comprising:
removing said strip of lead frames and said semiconductor device from said lower clamp member; and

encapsulating a portion of said strip of lead frames, said semiconductor device, and said at least two bond wires extending between said strip of lead frames and said semiconductor device in a material.

Please add the following new claims:

4. (New) A method for assembling a semiconductor device assembly having a semiconductor device and portions of a lead frame using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising:
supplying a strip of lead frames, said strip having opposed rails, having dam bars between said opposed rails, having at least two inner leads located at a first vertical level, having at least two outer leads located at a second vertical level, having a die mount paddle located at a third vertical level and having at least one integral clamping tab, said at least one integral clamping tab located at a fourth vertical level extending outwardly for contact by said upper clamp member;
attaching a semiconductor device to said die mount paddle, said semiconductor device having a plurality of bond pads;
aligning said strip of lead frames on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of said at least one integral clamping tab; and
attaching at least two bond wires to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

5. (New) The method of claim 4, further comprising:
forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and
deforming said at least one integral clamping tab to clamp portions thereof.

6. (New) The method of claim 4, further comprising:
removing said strip of lead frames and said semiconductor device from said lower clamp

member; and

encapsulating a portion of said strip of lead frames, said semiconductor device, and said at least two bond wires extending between said strip of lead frames and said semiconductor device in a material.

7. (New) A method for assembling a semiconductor device assembly having a semiconductor device and portions of a lead frame using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising:
providing a strip of lead frames, said strip having opposed rails, having dam bars between said opposed rails, having at least two inner leads located at a first vertical level, having at least two outer leads located at a second vertical level, having a die mount paddle located at a third vertical level and having at least one integral clamping tab, said at least one integral clamping tab located at a fourth vertical level extending outwardly for contact by said upper clamp member, said die mount paddle having a semiconductor device attached thereto, said semiconductor device having a plurality of bond pads;
aligning said strip of lead frames on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of said at least one integral clamping tab;
clamping portions of said lead frame using said upper clamp contacting portions of said lead frame while portions of said lower clamp contact portions of said lead frame; and
attaching at least two bond wires to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

8. (New) The method of claim 7, further comprising:
forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and
deforming said at least one integral clamping tab to clamp portions thereof.

9. (New) The method of claim 7, further comprising:
removing said strip of lead frames and said semiconductor device from said lower clamp

member; and

encapsulating a portion of said strip of lead frames, said semiconductor device, and said at least two bond wires extending between said strip of lead frames and said semiconductor device in a material.

10. (New) A method for assembling a semiconductor device assembly having a semiconductor device and portions of a lead frame using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising:
supplying a strip of lead frames, said strip having opposed rails, having dam bars between said opposed rails, having at least two inner leads located at a first vertical level, having at least two outer leads located at a second vertical level, having a die mount paddle located at a third vertical level and having at least one integral clamping tab, said at least one integral clamping tab located at a fourth vertical level extending outwardly for contact by said upper clamp member, said die mount paddle having a semiconductor device attached thereto, said semiconductor device having a plurality of bond pads;
aligning said strip of lead frames on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of said at least one integral clamping tab; and
attaching at least two bond wires to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

11. (New) The method of claim 10, further comprising:
forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and
deforming said at least one integral clamping tab to clamp portions thereof.

12. (New) The method of claim 10, further comprising:
removing said strip of lead frames and said semiconductor device from said lower clamp member; and
encapsulating a portion of said strip of lead frames, said semiconductor device, and said at least

two bond wires extending between said strip of lead frames and said semiconductor device in a material.

13. (New) A method for assembling a semiconductor device assembly having a semiconductor device and portions of a lead frame using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising:

supplying a strip of lead frames, said strip having opposed rails, having dam bars between said opposed rails, having at least two inner leads located at a first level, having at least two outer leads located at a second level, having a die mount paddle located at a third level and having at least one integral clamping tab, said at least one integral clamping tab located at a fourth level extending outwardly for contact by said upper clamp member, said die mount paddle having a semiconductor device attached thereto, said semiconductor device having a plurality of bond pads;

aligning said strip of lead frames on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of said at least one integral clamping tab;

preventing substantial movement of said die mount paddle by clamping a portion thereof; and attaching at least two bond wires to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

14. (New) The method of claim 13, further comprising:

forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and

deforming said at least one integral clamping tab to clamp portions thereof.

15. (New) The method of claim 13, further comprising:

removing said strip of lead frames and said semiconductor device from said lower clamp member; and

encapsulating a portion of said strip of lead frames, said semiconductor device, and said at least two bond wires extending between said strip of lead frames and said semiconductor device in a material.

16. (New) A method for assembling a semiconductor device assembly having a semiconductor device and portions of a lead frame using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising:

supplying a strip of lead frames, said strip having opposed rails, having dam bars between said opposed rails, having at least two inner leads located at a first level, having at least two outer leads located at a second level, having a die mount paddle located at a third level and having at least one integral clamping tab, said at least one integral clamping tab located at a fourth level extending outwardly for contact by said upper clamp member, said die mount paddle having a semiconductor device attached thereto, said semiconductor device having a plurality of bond pads;

aligning said strip of lead frames on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of said at least one integral clamping tab;

forcing portions of said die mount paddle into contact with portions of said lower clamp; and attaching at least two bond wires to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

17. (New) The method of claim 16, further comprising:

forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and

deforming said at least one integral clamping tab to clamp portions thereof.

18. (New) The method of claim 16, further comprising:

removing said strip of lead frames and said semiconductor device from said lower clamp member; and

encapsulating a portion of said strip of lead frames, said semiconductor device, and said at least two bond wires extending between said strip of lead frames and said semiconductor device in a material.

19. (New) A method for assembling a semiconductor device assembly having a semiconductor device and portions of a lead frame using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising:

supplying at least one lead frame from a strip of lead frames having opposed rails, having dam bars between said opposed rails, having at least two inner leads located at a first level, having at least two outer leads located at a second level, having a die mount paddle located at a third level and having at least one integral clamping tab, said at least one integral clamping tab located at a fourth level extending outwardly for contact by said upper clamp member, said die mount paddle having a semiconductor device attached thereto, said semiconductor device having a plurality of bond pads;

aligning said at least one lead frame on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of said at least one integral clamping tab;

forcing portions of said die mount paddle into contact with portions of said lower clamp; and attaching at least two bond wires to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

20. (New) The method of claim 19, further comprising:

forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and

deforming said at least one integral clamping tab to clamp portions thereof.

21. (New) The method of claim 19, further comprising:

removing said at least one lead frame and said semiconductor device from said lower clamp member; and

encapsulating a portion of said at least one lead frame, said semiconductor device, and said at least two bond wires extending between said strip of lead frames and said semiconductor device in a material.

22. (New) A method for assembling a semiconductor device assembly having a semiconductor device and portions of a lead frame using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising:
supplying at least one lead frame from a strip of lead frames having opposed rails, having dam bars between said opposed rails, having at least two inner leads located at a first level, having at least two outer leads located at a second level, having a die mount paddle located at a third level and having at least one integral clamping tab, said at least one integral clamping tab located at a fourth level extending outwardly for contact by said upper clamp member, said die mount paddle having a semiconductor device attached thereto, said semiconductor device having a plurality of bond pads;
aligning said at least one lead frame on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of said at least one integral clamping tab;
preventing substantial movement of portions of said die mount paddle by contacting portions of said die mount paddle with said upper clamp and said lower clamp; and
attaching at least two bond wires to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

23. (New) The method of claim 22, further comprising:
forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and
deforming said at least one integral clamping tab to clamp portions thereof.

24. (New) The method of claim 22, further comprising:
removing said strip of lead frames and said semiconductor device from said lower clamp member; and

encapsulating a portion of said at least one lead frame from a strip of lead frames, said semiconductor device, and said at least two bond wires extending between at least one lead frame from a strip of lead frames and said semiconductor device in a material.

25. (New) A method for assembling a semiconductor device assembly having a semiconductor device and portions of a lead frame using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising:
supplying at least one lead frame from a strip of lead frames, said strip having opposed rails, having dam bars between said opposed rails, having at least two inner leads, having at least two outer leads, having a die mount paddle located and having at least one integral clamping tab, said at least one integral clamping tab extending outwardly for contact by said upper clamp member, said die mount paddle having a semiconductor device attached thereto, said semiconductor device having a plurality of bond pads;
aligning said strip of lead frames on said lower clamp member of said wire bonding device having said upper clamp member overlying portions of said at least two inner leads and portions of said at least one integral clamping tab;
forcing portions of said die mount paddle into contact with portions of said lower clamp; and attaching at least two bond wires to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads.

26. (New) The method of claim 25, further comprising:
forming said die mount paddle having an upper surface thereof at a third vertical level located below an upper first vertical level of said at least two inner leads; and
deforming said at least one integral clamping tab to clamp portions thereof.

27. (New) The method of claim 25, further comprising:
removing said at least one lead frame from a strip of lead frames and said semiconductor device from said lower clamp member; and

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encapsulating a portion of said lead frame from a strip of lead frames, said semiconductor device, and said at least two bond wires extending between said at least one lead frame from said strip of lead frames and said semiconductor device in a material.